
# SG5300 DATA MODEM

## 800 MHz, 900 MHz

## POWERFUL AND RELIABLE DATA COMMUNICATIONS

The SG5300 Data Modem is part of the OpenSky® suite of products which deliver very high capacity, end-to-end digital voice and data communication. The small and lightweight unit is designed for mounting indoors or in a NEMA enclosure to provide reliable, secure, and cost-effective data communications to and from remote locations.

## FEATURES

Reliable access to the sophisticated data capabilities of Harris' OpenSky trunked wireless voice and data network.

Wide-area coverage and a secure wireless connection with many different types of fixed remote terminals.

Ideal for Smart Grid applications in the Utility industry and automated signage, traffic flow, and other tasks in the Transportation field.

### MULTIPLE APPLICATIONS

The SG5300 is suitable for a wide range of applications. The substantial coverage of an OpenSky private wireless network means that the SG5300 can be useful to collect or distribute data messages in locations where other wireless technologies are not affordable, available, or reliable enough. Utilities will find it an excellent means of communication with line reclosers, capacitor banks, and other devices on the grid, including direct connection to devices that use DNP 3.0 protocol. Transportation applications include automated signs, bus stop kiosks, and connection with remote traffic flow and weather sensors. Public safety agencies can use it to send alarms for public notification of severe weather or emergencies or for a host of other applications.

### WIDE-AREA COVERAGE

A small "spike" antenna can be fitted, or more remote coverage can be achieved with a fixed "yagi" antenna.

### OVER-THE-AIR PROGRAMMING

Features, profiles, and system updates are software-defined and can be reprogrammed over the air.

### SECURITY

The SG5300 is designed along with the OpenSky system to add a level of security to all connected devices, even serial DNP devices.

## GENERAL SPECIFICATIONS

**Dimensions (H x W x D):**
2.5 x 5.0 x 8.0 in.
(6.3 x 12.7 x 20.3 cm)

**Power Requirements:**
9-57 VDC
9.6 Watt Transmit
2.5 Watt Receive
<3 Watt Average Power at 95/5

**Physical Interface (Ethernet or Serial):**

**Ethernet** – Used for connecting to an RTU
Connector Type: RJ45
Electrical Protocol: 10/100 BaseT
Data Format: Ethernet IEEE 802.3

**Serial** – Used for data (SLIPP/PPP) as well as for maintenance support. The serial interface is configurable to operate as a full duplex DCE EIA/TIA-232 port
Connector Type: 9-pin D receptacle
Electrical Protocol: EIA/TIA-232 Full Duplex
Data Format: 8 bits/character, 1 start bit, 1 stop bit
Antenna: TNC connector (female)
LEDs: Rx/Tx, Status

**Case Color:** Metallic

**Mounting Holes:** 1/4 in. diameter 3.75 in. apart by 6.25 in. apart

## TRANSMITTER

| Typical performance specifications | **800** | **900** |
|---|---|---|
| Frequency Range (MHz): | 806-825 | 896-902 |
| Rated RF Power Trunked (W): | 0.5-3 | 0.5-3 |
| Frequency Stability (-30 to +60°C; +25°C Ref) (ppm): | ±1.5 | ±1.5 |
| Frequency Separation (MHz): | 19 (full bandwidth) | 6 (full bandwidth) |
| Modulation Deviation (kHz): | ±4.0 | ±2.0 |

## RECEIVER

| Typical performance specifications | **800** | **900** |
|---|---|---|
| Frequency Range (MHz): | 851-870 | 935-941 |
| Frequency Separation (MHz): | Full bandwidth | Full bandwidth |
| Channel Spacing (kHz): | 25/NPSPAC | 12.5 |
| Frequency Stability (-30 to +60°C; +25°C Ref) (ppm): | ±1.5 | ±1.5 |

## ENVIRONMENTAL SPECIFICATIONS

| | |
|---|---|
| Operating Temperature: | -22 to +140°F (-30 to +60°C) or 158°F/70°C at 30% duty |
| Relative Humidity: | 95% at 122°F (+50°C) |
| Operational Altitude: | 15,000 ft (4,572 m) |

## DIGITAL OPERATION

| | |
|---|---|
| Data Rate (kbps): | 19.2 for 800 MHz, 9.6 for 900 MHz |
| Modulation: | 4-level GFSK; M4FM |

## REGULATORY DATA

| Frequency Range (MHz) | RF Output (W) | Frequency Stability (ppm) | FCC Type Acceptance Number | Applicable FCC Rules | Industry Canada Certification Number | Applicable Industry Canada Rules |
|---|---|---|---|---|---|---|
| 806-809<br>809-824 | 3 | 1.5 | OWDTR-0063-E | 90 | 3636B-0063 | RSS-119 |
| 896-901<br>935-940 | 3 | 1.5 | OWDTR-0063-E | 90 | 3636B-0064 | RSS-119 |

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